KHARCHENKO, G.K.; TKACHENKO, V.G.

Preparation of test pieces for the mechanical testing of bimetals. TSvet. met. 38 no.2:89-90 F '65.

(MIRA 18:3)

KHARCHENKO, G.K.

Eutectic joint in titanium and steel. Avtom.svar. 18 no.11:78 N '65. (MIRA 18:12)

L 25847-66 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/EWP(k) LJP(c) JD/HM
ACC NR: AP5023082 SOURCE CODE: UR/0125/65/000/009/0039/0041

AUTHOR: Kharchenko, G.K. (Engineer); Gurskiy, P.I. (Candidate of technical sciences); Gordonnaya, A.A. (Engineer)

ORG: Electric Welding Institute, AN UkrSSR (Institut elektrosvarki im. Ye.O. Patona AN UkrSSR)

TITLE: Cold welding of titanium with steel

SOURCE: Avtomaticheskaya svarka, no. 9, 1965, 39-41

TOPIC TAGS: cold welding, titanium, steel, cold welding, intermetallic compound, plastic deformation, [illegible], elongation, plasticity, annealing, rupture strength

ABSTRACT: The efficiency of joints welded from titanium and steel was studied by investigating the dependence of the mechanical properties of the joints on the thickness of the intermediate compound formed during heating to 800°C at a holding tome of 30 sec - 10 min. The results show that 1) at 1 μ of intermetallic compound thickness the bend angle and elongation of anncaled samples as compared with nonannealed decreases fourfold and threefold, respectively, 2) the intermetallic compound thickness is 1 μ in samples heated in a surface at 800°C for 1.5 min and in a high-frequency inductor for ~45 sec, 3) the surface appearance of ruptured samples depends on the intermetallic compound thickness in the joint so that traces of another metal are found on the rup-

Card 1/2

UDC: 621.791.8:546.821:669.140

L 25847-66
ACC NR: AP5023082

tured metal surface when the thickness $\delta \leq 1.5 - 2\mu$ and smooth surfaces at $\delta > 2\mu$, and 4) a TiFe intermetallic phase appears on the titanium surface directly after the welding and after the annealing. It is concluded that a) under optimal conditions cold welding of titanium with steel ensures joints of adequate strength and plasticity, b) the increase in the intermediate compound thickness drastically reduces the plasticity of the joint and that the permissible thickness is $1 - 1.5\mu$, and c) that the appearance of the TiFe intermetallic phase in the joint directly after the welding signifies that substantial energy is being generated in the microvolumes subjected to plastic deformation. Orig. art. has: 3 figures.

SUB CODE: 11,13/ SUBM DATE: 22Jul64/ ORIG REF: 001

Card 2/2

L 32690-66 EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/WW/HM/JG/EM

ACC NR: AP6012287 (N) SOURCE CODE: UR/0125/65/000/011/0078/0078

AUTHOR: Kharchenko, G. K.

ORG: none

TITLE: Eutectic joining of titanium and steel

SOURCE: Avtomaticheskaya svarka, no 11, 1965, p 78

TOPIC TAGS: steel, titanium alloy, metal joining, eutectic welding, eutectic mixture, tensile strength/1Kh18N9T steel

ABSTRACT: When specimens of steel and Ti heated above eutectic temperature come into contact in a vacuum chamber, the formation of a liquid phase is readily observed visually. Specimens (diameter 12 mm, h = 30 mm) of Ti alloy (3% Al) and 1Kh18N9T steel were experimentally joined in this manner under a pressure of up to 0.1 kg/mm^2 which pushed the then forming liquid phase out of the contact zone, leaving at the Ti-steel interface a thin film of crystallized eutectic which influences the mechanical properties of the joint. Subsequent tensile tests of the thus welded joints, performed at room and high temperatures, showed that their ultimate strength at room temperature, though fairly stable (31-33.8/32.8 kg/mm^2), still is markedly lower than the ultimate strength of Ti alloy alone (70-80 kg/mm^2) and hence it should be

Card 1/2 UDC: 621.791.85:546.821:669.140

L 32690-66

ACC NR: AP6012287

increased by enlarging the contact surface. Accordingly, experiments with the eutectic welding of cone-shaped tubular joints were carried out: for this type of joint the overall contacting surface area of both tubes greatly exceeds the cross sectional area of each tube. Tensile tests of these joints showed that their strength exceeds the strength of the base metal. Orig. art. has: 1 table.

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 001

Card 2/2 BLG

L 34837-66 EWP(e)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k)

ACC NR: AP6021009 SOURCE CODE: UR/0125/66/000/006/0074/0074

AUTHOR: Kharchenko, G. K.; Gordonnaya, A. A.

ORG: none

TITLE: Diffusion welding of titanium with steel and a vanadium insert

SOURCE: Avtomaticheskaya svarka, no. 6, 1966, 74

TOPIC TAGS: titanium, vanadium, metal welding, diffusion welding, dissimilar metal welding, weld property/low carbon steel, CKh17T steel, 1Kh18N9T steel

ABSTRACT: Diffusion welding of titanium with low-carbon, OKh17T or 1Kh18N9T steel and a vanadium insert has been investigated. The steel and titanium specimens, 12 mm in diameter and 30 mm high, were welded with a vanadium foil insert, 0.2 mm thick, and subjected to mechanical and metallographic tests. The welds had a maximum tensile strength of 30 kg/mm^2; brittle failure occurred in the vanadium-steel boundary, where a vanadium carbide film was found. Formation of cubical vanadium carbides begins at temperatures over 550C and accelerates with increasing temperature. Titanium and vanadium carbides (microhardness of 1460 and 1045 kg/mm^2, respectively) were formed in the microstructure of titanium-vanadium-steel joints after vacuum welding and annealing at 900C for 5 hr; a fine dispersed vanadium-carbide structure was observed in the steel-vanadium-steel welds. The weld structure of titanium-vanadium-titanium after welding and annealing at 900C for 1 hr had two diffusion

Card 1/2 UDC: 621.791:532.72:669.295:669.14

L 34837-66

ACC NR: AP6021009

zones dissimilar in their structure and hardness. The first zone consisted of β-titanium (containing more than 14%V) with a microhardness of 200—300 kg/mm^2, and the second zone consisted of α-phase and α' supersaturated martensite phase with a hardness of 400—500 kg/mm^2. The failure in this weld occurred in titanium, far from the titanium-vanadium boundary. Orig. art. has: 2 figures. [AZ]

SUB CODE: 13/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5032

Card 2/2

L 04718-67 EWT(m)/EWP(w)/EWP(t)/ETI/EWP(k)

L 05706-67 EWF(k)/EWT(d)/EWT(m)/EWP(h)/T-2/EWP(t)/ETI-2/EWP(b)

ACC NR: AP6029677 (N) SOURCE CODE: UR/0136/66/000/008/0090/0092

JD/HM/JG

AUTHOR: Kharchenko, G. K.; Tkachenko, V. G.

ORG: none

TITLE: Titanium cladding of steel with a vanadium insert

SOURCE: Tsvetnyye metally, no. 8, 1966, 90-92

TOPIC TAGS: metal cladding, titanium ~~cladding~~, titanium ~~clad~~ steel, metal property

ABSTRACT: Titanium cladding of steel with a vanadium insert has been tested. The cladding was done by rolling a pack consisting of electrolytically polished steel, vanadium, and titanium sheets in a two-high vacuum mill 170 at 1000C. It was found that the bond strength of clad sheets was over 30 kg/mm^2. Fracture occurred in the steel-vanadium transition zone, because of the layer containing brittle vanadium carbides with microhardness of over 1150 kg/mm^2. Alloying the steel with up to 20% carbon-forming elements did not reduce the diffusion of carbon from steel to vanadium. Diffusion of carbon increases with increased reduction. Therefore, rolling should be performed at the lowest possible temperature and reduction. In another experiment, high-purity vanadium (less than 0.02% carbon) was diffusion bonded to titanium, and to titanium and iron, in vacuum at 900C. Two diffusion layers were found in the transition zone between titanium and vanadium. One, on the vanadium side, was β-titanium (microhardness - 200—300 kg/mm^2); the other consisted of α-phase and

Card 1/2 UDC: 669.868

L 05706-67

ACC NR: AP6029677

oversaturated α'-phase (microhardness - 400—500 kg/mm^2). The microstructure of the transition zone between iron and vanadium showed again the presence of vanadium carbides. Orig. art. has: 3 figures. [TD]

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 003/ ATD PRESS: 5069

Card 2/2

KHARCHENKO, C. M., Engineer

"Application of Centrifugal Force for Separation of Light Ashes." Sub 12 Jan 51, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

S/080/60/033/007/008/020
A003/A001

AUTHORS: Romanov, V. V., Lukovtsev, P. D., Kharchenko, G. N., Sandler, P. I.

TITLE: The Nickel-Zinc Storage Cell [1]

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 7, pp. 1556-1563

TEXT: The results of investigations into the properties of a nickel-zinc storage cell with insoluble zinc electrode were presented and an evaluation of this type of storage cell compared to other alkali storage cells [k] is given. The oxide-zinc electrodes were porous plates made by sintering powder-like nickel. The pores were filled with $Ni(OH)_2$. The negative electrodes were plates pressed from a mixture of zinc oxide with spongy zinc and an addition of starch. The cell was filled with a solution of caustic soda with a density of 1.30 and an addition of 10 g/l lithium hydroxide. The voltage during charging of the cell varied from 1.75-2.1 v, during 8-hour discharging from 1.8-1.5 v. The capacity of the cell decreases with an increase in the intensity of the discharge current according to Morozov's formula (Ref. 5). With a lowering of the temperature the capacity and the voltage decrease noticeably attaining at -10°C only 50% of the value at room temperature. At -40°C zinc-nickel cells break down. The average

Card 1/2

self-discharge per day attains 2%. After 24-70 cycles of charging and discharging the capacity decreases and finally the cells break down completely. The cause of the breakdown is the destruction of the separation film between the electrodes and the formation of zinc dendrites. Nickel-zinc storage cells hold an intermediate position between cadmium-nickel and silver-zinc storage cells as to specific energy which is lower than that of СЦП-12 (STsD-12) silver-zinc cells, but 40-50% higher than that of cadmium-nickel cells. Their life, preservation in the filled state and efficiency at low temperature, however, is considerably inferior to cadmium-nickel cells. The self-discharge is determined by the self-discharge of the zinc electrode. An investigation carried out by the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry of the AS USSR) makes it probable that the high self-discharge is due to small amounts of cobalt introduced into the positive electrode as activating additive. Nickel-zinc storage cells can be used only in those cases, in which the requirements concerning life, preservation and efficiency at low temperatures are only moderate. There are 5 graphs, 2 tables, 1 diagram and 6 references: 4 Soviet, 1 English and 1 German.

SUBMITTED: September 14, 1959

Card 2/2

KHARCHENKO, G.P., elektromekhanik

Improve the quality of switchboard cords. Avtom. telem. i sviaz' 3 no.5:42 My '59. (MIRA 12:8)

1.TSentral'naya telefonnaya stantsiya Kupyanskoy distantsii signalizatsii i svyazi Yuzhnoy dorogi.
(Telephone switchboards--Equipment and supplies)

SPERANSKIY, Nikolay Nikolayevich; KHARCHENKO, Grigoriy Stepanovich; OGIYENKO, S.I., red.; RADNAYEV, A.N., tekhn. red.

[First place in the meat industry of the East] Pervenets miasnoi industrii Vostoka. Ulan-Ude, Buriatskoe knizhnoe izd-vo, 1960. 86 p. (MIRA 14:11)

(Buryat-Mongolia—Meat industry)

KHARCHENKO, I.

KHARCHENKO, IVAN.

Den'aviatsii - smotr komsomol'skogo shefstva. Moskva, Molodaia gvardiia, 1933. 39 p.
Title tr.: Aviation day - parade of the Young Communist League leadership.

UG635.R9K18

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

KUROCHKIN, B.; KHARCHENKO, I.; PYATIBRATOV, Ya.; SOKOLENKO, V.

Electric locomotive builders need thermosetting insulation lacquers. Mlek. i tepl.tiaga 2 no.12:8 D '58. (MIRA 12:1)

1. Direktor Novocherkasskogo elektrovozostroitel'nogo zavoda (for Kurochkin). 2. Predsedatel' zavodskogo komiteta profsoyuza Novocherkasskogo elektrovozostroitel'nogo zavoda (for Kharchenko). 3. Sekretar' partkoma Novocherkasskogo elektrovozostroitel'nogo zavoda (for Pyatibratov). 4. Sekretar' komiteta Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi Novocherkasskogo elektrovozostroitel'nogo zavoda (for Sokolenko).
(Electric locomotives) (Insulating materials)
(Lacquers and lacquering)

YELIZAROV, S., inzh.-podpolkovnik; KHARCHENKO, I., inzh.-podpolkovnik.

A new fuel unit. Tankist no.4:50-53 Ap '58. (MIRA 11:5)
(Gas and oil engines)

KHLYCHKINKO, I., kand. tekhn. nauk.

Effect of the adjustment of fuel equipment, condition of air cleaners and thermal conditions on the performance of the IAAZ-204 engine. Avt. transp. 36 no.2:9-11 F '58. (MIRA 11:2)

(Diesel engine)

KHARCHENKO, I., kand. tekhn. nauk.

Causes of breaks and pittings in pulverizers of pump and injection units for IAAZ diesel engines. Avt. transp. 36 no.11:22-24 N '58. (MIRA 11:11)
(Diesel engines)

KHARCHENKO, I.

Interrepublican seminar of political science instructors. Prof.-tekh.obr. 18 no.6:23 Je '61. (MIRA 14:7)
(Riga—Communist education)

KHARCHENKO, I.

Let's create a textbook on vocational pedagogics. Prof.-tekh. obr. 19 no.6:20 Je '62. (MIRA 15:7)
(Teaching)

YEMEL'YANOV, Leonid Aleksandrovich; KHARCHENKO, I.A., kand. tekhn. nauk, dots., retsenzent; GUSEV, G.N., inzh., red.; YURKEVICH, M.P., inzh., red. izd-va; PETERSON, M.M., tekhn. red.

[Filtration of diesel fuel]Fil'tratsiia dizel'nogo topliva. Moskva, Mashgiz, 1962. 105 p. (MIRA 15:11)
(Diesel fuels)
(Filters and filtration)

S/185/62/007/010/003/020
D234/D308

AUTHORS: Kharchenko, I. F., Hryshayev, I. O. and Nekrashevych, O. N.

TITLE: Energy and phase characteristics of a linear electron accelerator with wave phase velocity equal to the velocity of light

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 10, 1962, 1051-1060

TEXT: The authors study the motion of an electron in a waveguide, the wave velocity being constant and equal to that of light; the accelerating field intensity is also constant. Asymptotic final phase (for an infinitely long waveguide) and the output energy are plotted against injection phase. There are two domains, in one of which the energy is a periodic function of the phase and on the average remains constant. Optimum beam width and density are discussed. The conclusions allow a qualitative estimation of the parameters of an accelerator of finite length. Design calculations

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S/185/62/007/010/003/020
D234/D308

Energy and phase ...

are made for an accelerator with an output energy of about 7 Mev and the wavelength of the supply generator 10.7 cm. Generalized relations between energy, phase and position are plotted, from which the output data can be found by interpolation when injection parameters are given. It is concluded that more than 50% of the electrons at the output are in the domain of phase instability (-35° to -45°) and possess an energy lying between 6.9 and 7.5 Mev, if the grouping parameter K has the optimum value of 1.5. These parameters can be improved by increasing the accelerating field intensity and the injection energy. On the basis of these calculations an accelerator was constructed whose output parameters correspond with the above data. The maximum experimental energy is about 6 Mev, which is explained by attenuation of the field along the accelerator, not taken into account in the design. The authors thank I. M. Novikov and L. I. Rudnyev for help in the calculations and V. O. Vyushnyakov for discussion. There are 10 figures. The most important English-language reference reads as follows: J. Swihart, E. Akeley, J. Appl. Phys., 24, 640, 1953.

Card 2/3

S/185/62/007/010/003/020
D234/D308

Energy and phase ...

ASSOCIATION: Kharkivs'kyy derzhuniversytet (Kharkiv State University)

SUBMITTED: March 12, 1962

Card 3/3

05444
SOV/120-59-3-15/46

AUTHORS: Kharchenko, I. F., Nikolayev, R. M., Nekrashevich, A.M., and Zeydlits, P. M.

TITLE: A Computer for Studying the Motion of Particles in a Linear Electron Accelerator (Schetno-reshayushcheye ustroystvo dlya issledovaniya dvizheniya chastits v lineynom elektronnom uskoritele)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3, pp 71-76 (USSR)

ABSTRACT: This mechanical analyzer is supplied with the parameters of the accelerating system and indicates the parameters of the output beam (energy spectrum, phase width of bunch, mean current); it is also used to examine the phase motion of the particle. The z axis lies along the waveguide; φ is the phase of a particle relative to the accelerating field, U_0 is the initial energy of that particle, and c is the speed of light; $\beta = \dot{z}/c$. Eq (1) is simply the kinetic equation; Eq (2) gives the change in phase occurring in a time d and λ is the wavelength in the guide. Eq (3) is the integral of (2) and (4) is found by combining (3) with (1). Eq (5)

Card 1/2

05444

A Computer for Studying the Motion of Particles in a Linear Electron Accelerator

gives the quantity indicated by the computer, which is seen in Fig 1; Fig 2 shows the kinematic system. The equations on p 73 relate to the operations of the various parts. Fig 3 shows the follower system and the multiplying mechanism; Fig 4 gives the circuits, which use microswitches and a reversible asynchronous motor. Fig 5 shows the phase velocity and accelerating field for one section as functions of z for $\lambda_0 = 10.7$ cm; the calculation took 5 - 7 min. It is stated that the errors do not exceed 3% in phase or 2% in energy. Fig 6 shows the phase oscillations occurring in an accelerator designed to an output of 4 - 5 MeV. There are 6 figures and 3 references, 1 of which is Soviet and 2 English.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR (Physico-Technical Institute AS Ukr SSR)

SUBMITTED: March 31, 1958

Card 2/2

KHARCHENKO, I.F.; FAYNBERG, Ya.B.; NIKOLAYEV, R.M.; KORNILOV, Ye.A.; LUTSENKO, Ye.A.; PEDENKO, N.S.

Investigating the interaction between an electron beam and plasma. Zhur.eksp.i teor.fiz. 38 no.3:685-692 Mr '60. (MIRA 13:7)

1. Fiziko-tekhnicheskiy institut Akademii nauk Ukrainskoy SSR.
(Electron beams) (Plasma (Ionized gases))

FAYNBERG, Ya.B.; Prinimali uchastiye: KURILKO, V.I.; KHARCHENKO, I.F.; SHAPIRO, V.D.

Interaction between beams of charged particles and a plasma. Atom. energ. 11 no.4:313-335 O '61. (MIRA 14:9)
(Particles (Nuclear physics)) (Plasma (Ionized gases))

9,3130 (1163, 1538, 1141)
24.6716

25021
S/057/61/031/007/001/021
B108/B209

AUTHORS: Kharchenko, I. F., Faynberg, Ya. B., Nikolayev, R. M., Kornilov, Ye. A., Lutsenko, Ye. I., and Pedenko, N. S.

TITLE: Interaction of an electron beam with a plasma in a magnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 7, 1961, 761-765

TEXT: The interaction between a beam of charged particles and a plasma has great physical and technical significance and is therefore subject to the present study. In a plasma in a magnetic field, an electron beam may interact with both E and H waves. Moreover, parameter resonance may occur since the arising waves lead to a change of the parameters which is periodical in space and time. When the frequency of the plasma particles stands in a certain ratio to the frequency of the electromagnetic field forming by self-modulation of the electron beam when moving through a plasma, parameter resonance is possible. This ratio between the frequency ω of the longitudinal waves, due to the interaction between beam and

Card 1/3

Interaction of an electron beam ...

plasma, and the cyclotron frequency ω_H is given by $\omega = \frac{2\omega_H}{p}$ or by $\frac{2\pi}{L}V_o = \frac{2\omega_H}{p}$ where L is the periodicity of the wave in the beam, V_o the velocity of the beam (p=1,2.....). However, also other instabilities may arise when an electron beam interacts with a plasma. The experimental arrangement for the present studies provided a 50-ma electron beam (5 kev) to interact with a plasma in a vacuum of 10^{-2} - 10^{-3}mm Hg. The magnetic field strength during the experiment was 2000 gauss. The results showed that at certain magnetic field strengths the electron beam becomes unstable, which leads to a widening of the glowing plasma (from 3 to 30 mm) and a decrease in the beam energy. When the electron beam was pre-modulated on a frequency f_m, instability occurred at four magnetic field strengths corresponding to the electron-cyclotron frequencies of $\frac{1}{2}f_m$, f_m, $\frac{3}{2}f_m$, and $2f_m$. The width of these unstable ranges was only a few per cent of the cyclotron frequency. The h. f. oscillations generated in the unstable zone

Card 2/3

Interaction of an electron beam ...

in the beam (1800 to 3000 Mc/sec, half-width 30 - 50 Mc/sec) offer the possibility of obtaining millimeter waves by further increasing the magnetic field strength. Further results are announced to be given in a following paper. This paper was read at the Second Conference on Magnetohydrodynamics, Riga, July 1960. There are 3 figures, and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR Khar'kov (Institute of Physics and Technology AS UkrSSR Khar'kov)

SUBMITTED: October 3, 1960

Card 3/3

ACCESSION NR: AT4036050 S/2781/63/000/003/0139/0144

AUTHOR: Kharchenko, I. F.

TITLE: Coherent interaction between an electron beam and a plasma

SOURCE: Konferentsiya po fizike plazmy* i problemam upravlyayemogo termoyadernogo sinteza. 3d, Kharkov, 1962. Fizika plazmy* i problemy* upravlyayemogo termoyadernogo sinteza (Plasma physics and problems of controlled thermonuclear synthesis); doklady* konferentsii, no. 3. Kiev, Izd-vo AN UkrSSR, 1963, 139-144

TOPIC TAGS: plasma research, electron beam, plasma density, plasma wave absorption, plasma electromagnetic property, microwave plasma

ABSTRACT: Apparatus described in other investigations (ZhETF, v. 38, 685, 1960; Proceedings Fourth Internationa.. Conference Ionization Phenomena Gases, Uppsala, 1959, v. 2, 671, 1960) was used to carry out more detailed measurements of the coherent energy losses of an

Card 1/5

ACCESSION NR: AT4036050

electron beam passing through a plasma. The losses were measured with an electrostatic cylindrical analyzer and a phase analyzer. The plasma density was measured with a high-frequency double probe. The results show that with the increasing plasma density the energy spectra shift towards lower energies, the current in the beam decreases, and the spectra broaden. An increase in the energy of a certain part of the current, compared with initial energy, is also observed. The maximum of energy loss and the maximum current are observed at the same plasma density (3.5×10^{10} el/cm^3). Since the energy loss per electron turns out to be much higher than its theoretical value, this indicates the presence of coherent interaction between the electron bunches in the modulated beam and the plasma. Factors that prevent an exact quantitative comparison between theory and experiment are indicated, and some major discrepancies between theory and experiment are partially explained. "In conclusion the author is grateful to Ya. B. Faynberg for scientific guidance of the

Card 2/5

ACCESSION NR: AT4036050

work." Orig. art. has: 2 formulas and 2 figures.

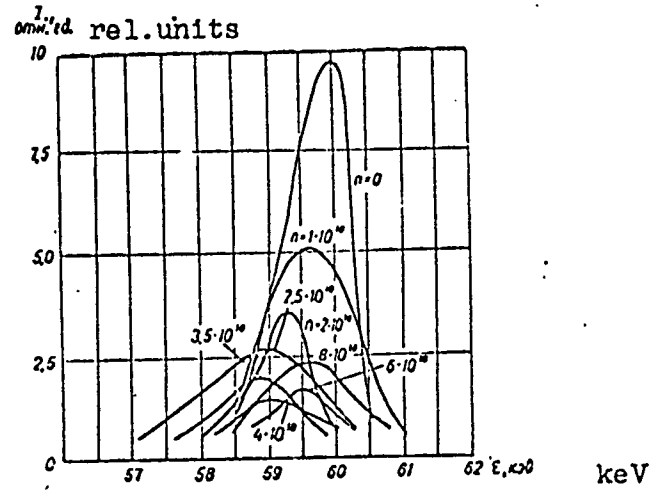
ASSOCIATION: None

SUBMITTED: 00	DATE ACQ: 21May64	ENCL: 02
SUB CODE: ME	NR REF SOV: 005	OTHER: 000

Card 3/5

ACCESSION NR: AT4036050

ENCLOSURE: 01



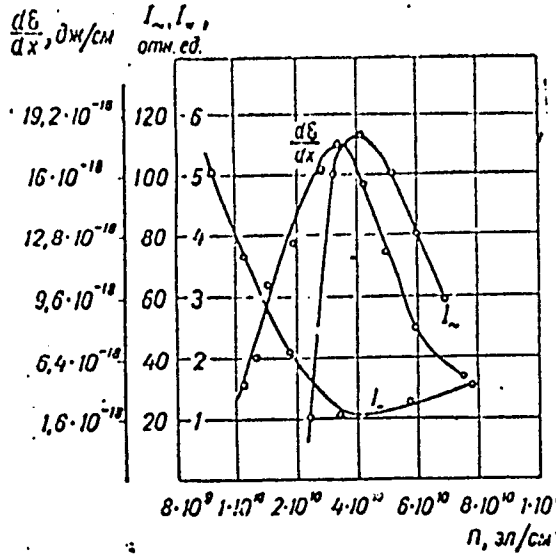
Energy spectra of electron beam passing through a plasma at different energy densities

Card 4/5

ACCESSION NR: AT4036050

ENCLOSURE: 02

J/cm



Maximum energy loss and current as functions of the plasma density

Card 5/5

KHARCHENKO, I.F.

Coherent interaction between an electron beam and a plasma. Atom. energ. 14 no.3:314-315 Mr '63. (MIRA 16:2)
(Electron beams) (Plasma (Ionized gases))

[illegible]

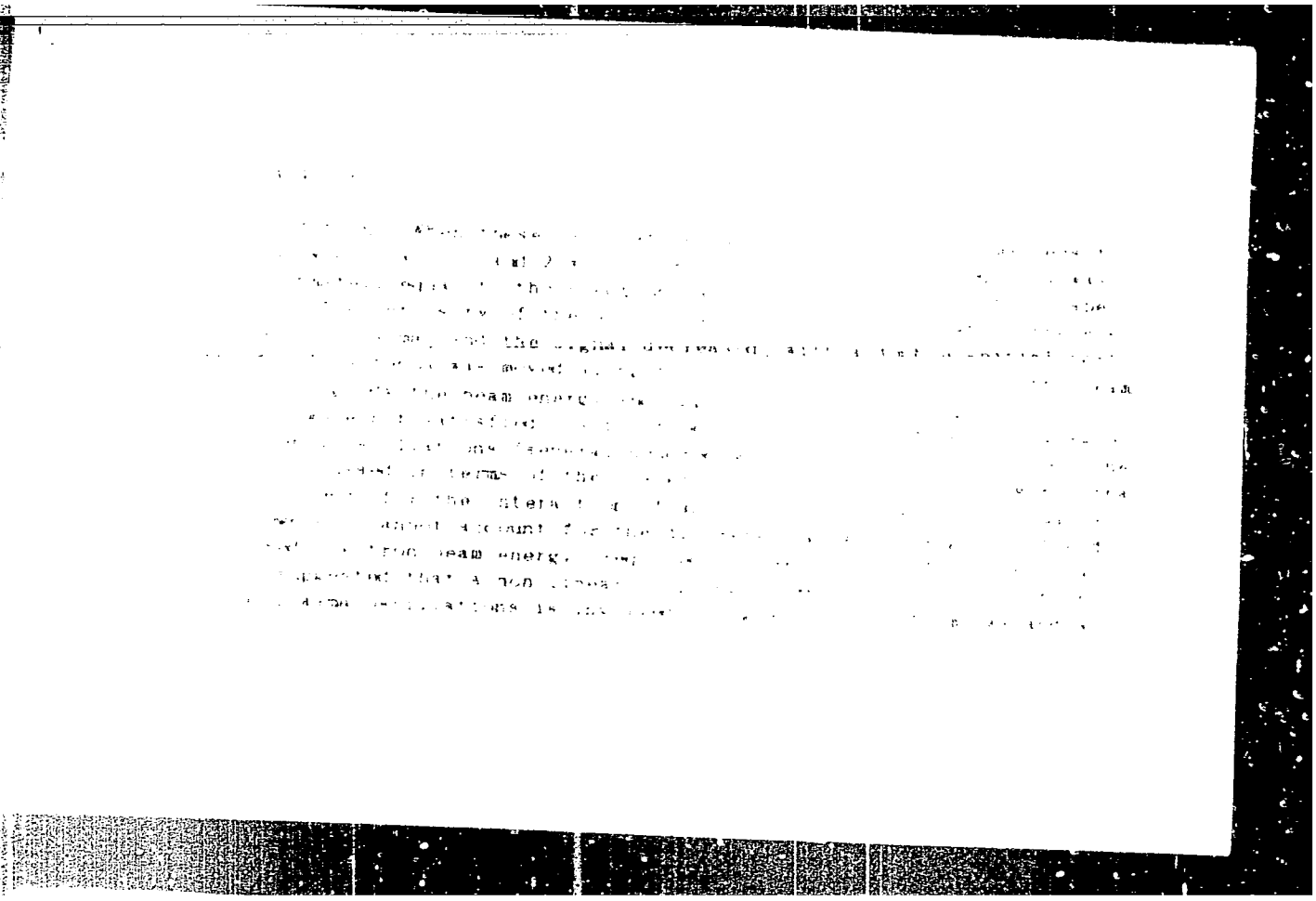
...hanko, I.F., Faynberg Ya B [illegible]

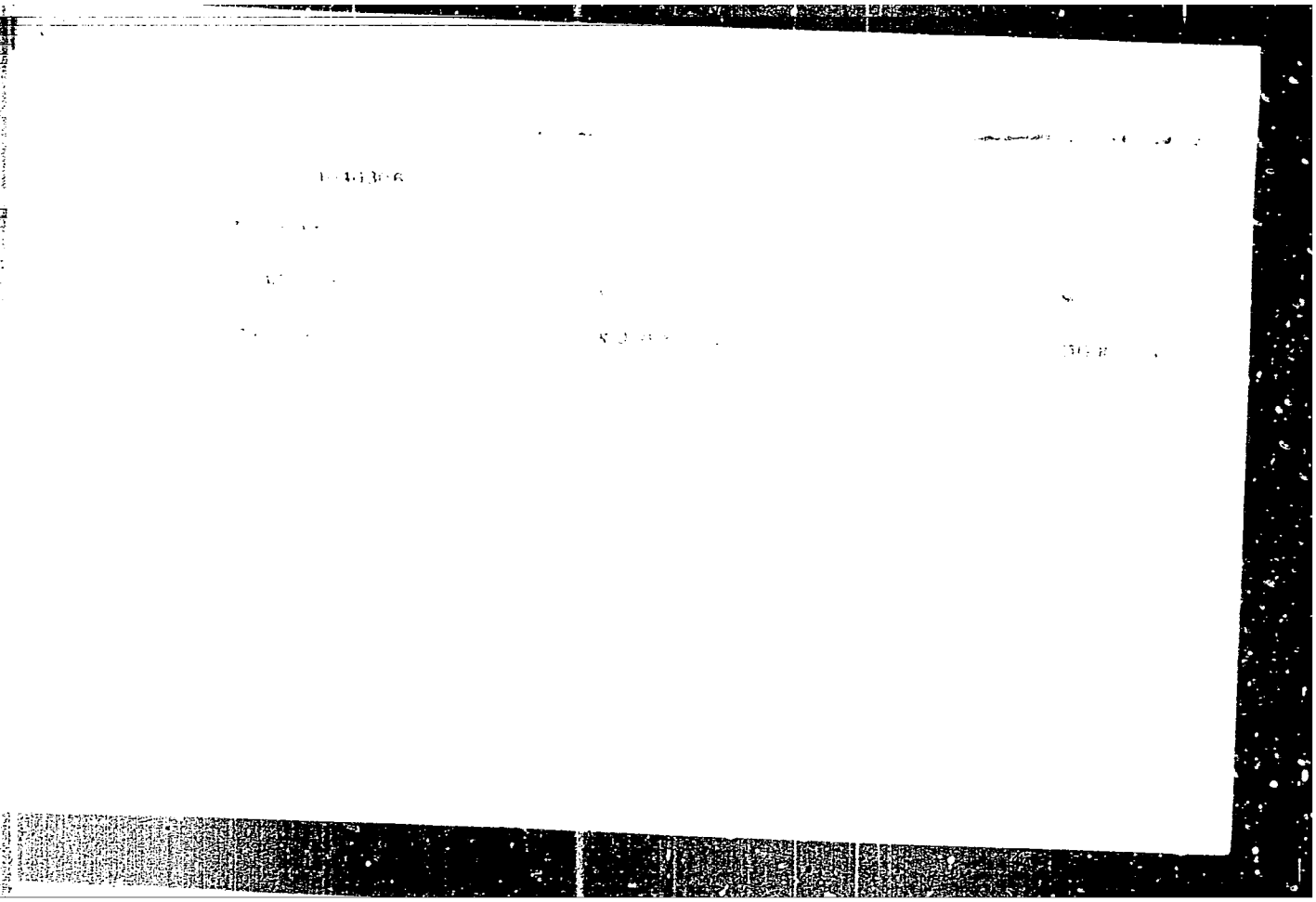
...ation of oscillations in a plasma [illegible]

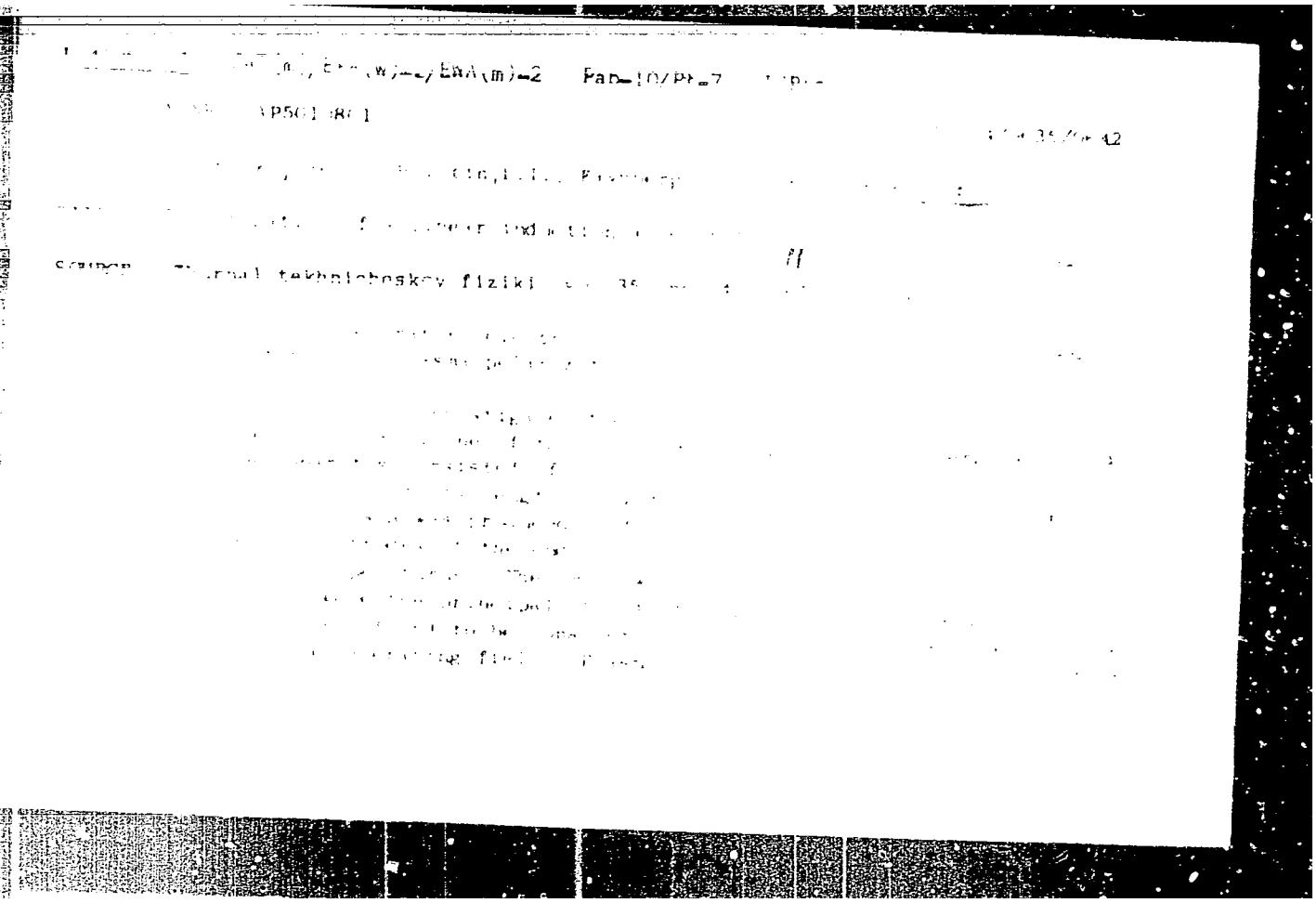
[illegible] fiziki, [illegible] 14

[illegible] plasma density [illegible] plasma [illegible]
[illegible] electron beam

The excitation of oscillations [illegible]
[illegible] electron beam was [illegible]
[illegible] was employed with [illegible]
[illegible] ionization of the residual [illegible]
[illegible] first by the electron beam [illegible]
[illegible] oscillations of the plasma were [illegible]
[illegible] antenna located near the apparatus [illegible] high
[illegible] of the electron beam current [illegible]
[illegible] at frequencies close [illegible] the electron
[illegible] when the electron beam energy and the magnetic field strength [illegible]







further experiments will be required for their elucidation. In

authors express their grat

Fig. art. has 2

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10

L 4242-66 EWT(1)/EWT(m)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2/EWA(m)-2 IJP(c)
ACCESSION NR: AT5007973 OS/AT/JXT S/0000/64/000/000/1023/1029 106 103 041

AUTHOR: Berezin, A. K.; Berezina, G. P.; Bolotin, L. I.; Gorbatenko, M. F.; Yegorov, A. N.; Zagorodnov, O. G.; Kornilov, B. A.; Kurilko, V. I.; Lutsenko, Ye. I.; Laypkalo, Yu. M.; Pedenko, N. S.; Kharchenko, I. F.; Shapiro, V. D.; Shevchenko, V. I.; Faynberg, Ya. B.

TITLE: Acceleration of charged particles with the aid of longitudinal waves in plasma and plasma waveguides

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 1023-1029

TOPIC TAGS: high energy accelerator, electron beam, plasma accelerator, plasma waveguide

ABSTRACT: Plasma waveguides and noncompensated electron and ion beams can be utilized as accelerating systems in linear accelerators (Faynberg, Ya. B., Symposium CERN 1, 84 1956); *Atomnaya energiya* 6, 431 (1959)). In such systems, slow electromagnetic waves $v_\phi \leq c$ are propatated, which are necessary for particle acceleration. The waveguide properties of restrained plasma and noncompensated beams are displayed in the case of waves in the meter and centimeter range even for com-

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paratively small plasma densities around 10^9 to 10^{13} cm^{-3}). Under these conditions the high-frequency energy losses during wave propagation, which are due to the collisions of plasma particles, are small. The density of electrons in metals (about 10^{23}) is many orders greater than is necessary for ensuring waveguide properties in the microwave range. This leads to great losses of high-frequency power during wave propagation in metallic conductors. For plasma densities around 10^9 to 10^{13} cm^{-3}, the energy losses during particle transist through the plasma, which are proportional to plasma density, are insignificant, from 10^{-5} to 10^{-6} ev/cm. This means that plasma waveguides are "transparent" for accelerated particles. According to the conditions of acceleration the particles are divided into individual bunches. Thus the loss of particles moving in the plasma can increase greatly because of the occurrence of coherent deceleration representing the inverse of the effect of coherent acceleration, which was established by V. I. Veksler (Symposium CERN 1, 80 (1956)). However, even for accelerated particle fluxes of the order of tens of amperes, these losses are all insignificant. Because waveguide properties are determined by the plasma, the metal surfaces can be remote from regions with large field strengths or eliminated altogether, which permits a significant increase in the permissible voltages of the accelerating fields and a substantial de-

crease in the high-frequency energy losses. It is also important to concentrate the electromagnetic energy in the radial direction only in the regions where the accelerated particles are moving. Thus for a given field strength the electromagnetic energy flux decreases markedly. If the fluxes of accelerated particles are large, the waveguide properties necessary for acceleration can be ensured by the particles of the beam which are not entrapped in the acceleration process, through which particles the entrapped particles move. The beam itself which is injected into the accelerator operates under these conditions of an accelerating system. To clarify the possibilities of particle acceleration by means of electromagnetic waves excited by charged particle beams, and also to investigate the influence of beam instabilities upon the acceleration process, the Physicotechnical Institute, Academy of Sciences Ukrainian SSR conducted theoretical and experimental investigations on the interaction of charged particle beams with a plasma. These investigations were intended to lead to, not the design and construction of a definite accelerator model, but the physical processes occurring during the interaction under consideration, and in this way to a determination of the possibilities of plasma methods of acceleration which are being developed at this institute. The theory developed up to the present time of the interaction between beams and plasma has been essentially a linear theory. As a result of the work of V. D. Shapiro and V.

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I. Shevchenko at this institute for the case of beams of not very large density, a nonlinear theory has been created which permits one to trace the process of interaction of an initially nonmodulated beam and mono-energetic beam with a plasma from the initial stage to saturation. As is shown, a large part of the beam's energy of ordered motion (75% of its initial energy) is lost by the beam as a result of collective interactions with the plasma. Thus the energy expended upon excitation of oscillations amounts to 30%; upon increasing the thermal energy of the plasma, to 30%; and upon increasing the thermal energy of beam, to 15%. The experimental investigations of this interaction were carried out by I. F. Kharchenko and A. K. Berezin and their respective co-workers. Their results are in agreement with the theory of M. F. Gorbatenko. The mentioned institute has also carried out further theoretical and experimental investigations on the problems of electromagnetic wave propagation in plasma waveguides excited by high-frequency wall sources. The experimental studies, by O. G. Zagorodnov, et al., showed that the results agree well with theory under conditions of insignificant nonlinear effects. Current experiments are concerned with highly-ionized plasmas with density 10^{11} to 10^{12}. Orig. art. has: 4 figures, 1 table.

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ACCESSION NR: AT5007973

ASSOCIATION: Fiziko-tekhnicheskiy institut AN UkrSSR (Physicotechnical Institute, AN UkrSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP

NO REF SOV: 005 OTHER: 001

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L 2489-66 EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2 IJP(c) AT

ACCESSION NR: AP5020721 UR/0057/65/035/008/1378/1384

AUTHOR: Kornilov, Ye. A.; Kovpik, O. F.; Faynberg, Ya. B.; Bolotin, L. I.; Kharchenko, I. F.

TITLE: Time variations of high frequency oscillations during development of instability in a beam-plasma system

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1378-1384

TOPIC TAGS: plasma instability, plasma beam interaction, plasma oscillation, electron beam, magnetic field

ABSTRACT: The authors have continued their investigations, described in the preceding paper (ZhTF, 35, 1372, 1965; see abstract AP 5020720), of the production of plasma by an electron beam traversing a gas in a longitudinal magnetic field. The authors describe their apparatus in the preceding paper and in more detail elsewhere (Fizika plasmy i problemy upravlyayemogo termoyadernogo sinteza, Vol.4. Izd. AN USSR, Kiyev, 1964). It was found that oscillations are excited at integral multiples of half the Larmor frequency and that the width and peak frequency of the spectrum of these oscillations vary periodically at the frequency of ionic sound.

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The spectrum narrows with increasing pressure and broadens with increasing beam current. When the magnetic field strength is increased beyond a certain value, the oscillations cease to be continuous but come in bursts which follow each other at intervals that decrease with increasing magnetic field strength. Tilting the beam moderately with respect to the direction of the magnetic field so as to introduce a small transverse velocity component increased the amplitude of the oscillations by two orders of magnitude. The reasons for the pulsation of the oscillations at high field strengths, for the increase of the amplitude of the oscillations in the presence of a transverse electron velocity component, and for the periodic variation of the spectrum of the oscillations are still obscure. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 26Oct64 ENCL: 00 SUB CODE: ME

NR REF SOV: 012 OTHER: 007

Card 2/2

L 04748-67 EWT(1) LJP(c) AT/GD (N)

ACC NR: AT6020453 SOURCE CODE: UR/0000/65/000/000/0217/0228

AUTHOR: Lutsenko, Ye. I.; Bolotin, L. I.; Faynberg, Ya. B.; Kharchenko, I. F.

53

ORG: none

B+1

TITLE: Investigation of a linear induction accelerator

SOURCE: AN UkrSSR. Vzaimodeystviye puchkov zaryazhennykh chastits s plazmoy (Interaction of charged particle beams with plasma). Kiev, Naukova dumka, 1965, 217-228

TOPIC TAGS: plasma accelerator, plasma pinch, electron polarization, plasma density

ABSTRACT: The aim of the experiments described in the present work was to investigate instability in electron beams generated in a plasma by the application of electric fields greater than those given by the criteria for the "run-away" condition. The accelerating system consists of 12 toroidal cores with one-turn coils. These coils serve as the primary circuit of the accelerating system and are energized by a capacitor discharge. The secondary circuit, formed by a plasma column 4 cm in diameter, was thus subjected to a spiral electric field. The plasma, initially generated by a 0.5 kw HF generator, reached a density of 10^{10} cm^{-3}. The polarization effects, generated current of accelerated particles and the spectrum of the induced oscillations were studied using Rogovskiy coils and microwave equipment. Typical currents of 30 amp with electron energy of 25-30 kev were generated. This is considerably below the available

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stored energy and is explained by the observed oscillations radiated by the plasma and correlated with the current pulse. Electron beams moving in the opposite direction to the applied field were also observed. These were correlated with the radial pinching of the plasma. Orig. art. has: 7 figures.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 003/ OTH REF: 006

Card 2/2

L 04747-67 EWT(1) IJP(c) AT/GD
ACC NR: AT6020454 (N) SOURCE CODE: UR/0000/65/000/000/0229/0234

AUTHOR: Pedenko, N. S.; Bolotin, L. I.; Faynberg, Ya. B.; Kharchenko, I. F.; Shepelev, N. P.

ORG: none

TITLE: High current linear induction accelerator

SOURCE: AN UkrSSR. Vzaimodeystviye puchkov zaryazhennykh chastits s plazmoy (Interaction of charged particle beams with plasma). Kiev, Naukova dumka, 1965, 229-234

TOPIC TAGS: plasma accelerator, plasma heating, betatron accelerator, Mev accelerator

ABSTRACT: A method of generating powerful electron beams and the use of these beams to generate large amplitude electrostatic waves and to heat a plasma are described. The linear betatron constructed for this study consists of an electron source and an accelerating section formed by a power transformer with unity transformation coefficient. The outline of the design is given in a block diagram and its operation is discussed. An electric field of 6 kv/cm was achieved in the accelerating section. The total potential of 200 kv resulted in electron beam currents of 1000 A. The analysis of the design has shown that the most suitable source of energy is a series of capacitors with spark-gap switching. This scheme eliminates synchronization problems and provides a desirable current pulse. The design reported here can basically serve as

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L 04747-67 APPROVED FOR RELEASE: 09/17/2001 CIA-RDP86-00513R000721810010-
ACC NR: AT6020454

a guide in the construction of a high current accelerator operating in the megavolt range. Orig. art. has: 2 figures, 1 table, 3 formulas.

SUB CODE: 18 SUBM DATE: 11Nov65/ ORIG REF: 005/ OTH REF: 002

Card 2/2

KHARCHENKO, I. G.

KHARCHENKO, I. G.- "Syphilis among the Gurals during the Foreign Administration and the Struggle Against it under the Soviet Government." L'vov State Med Inst, L'vov, 1955 (Dissertations for Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

KHIL'KO, M.M.; MOLCHANOVA, M.I.; KOTIK, P.L.; LYUDVINSKIY, A.I.; KOREN, L.N.; KHARCHENKO, I.G.

Crown firebrick of a finely ground mixture of magnesite and chromite. Ogneupory 28 no.6:256-258 '63. (MIRA 16:6)

1. Makeyevskiy metallurgicheskiy zavod im. Korova (for Khil'ko, Molchanova). 2. Nikitovskiy dolomitovyy kombinat (for Kotik). 3. Dnepropetrovskiy metallurgicheskiy institut (for Lyudvinskiy, Koren, Kharchenko).

(Firebrick)

KHARCHENKO, I.P., inzh.; BYCHKOVA, T.G., inzh., red.; BRONSHTEYN, I.I., red.; BORUNOV, N.I., tekhn. red.

[Work experience of A.P.Iziumovs' and A.I.Prikazchik's brigades at the Zmiyev construction sector of the Trust for Heat and Power Installations] Opyt raboty brigad A.F.Iziumova i A.I.Prikazchika na Zmievskom montazhnom uchastke tresta "Teploenergomontazh." Moskva, Gosenergoizdat, 1962. 12 p. (MIRA 16:6)

1. Teploenergomontazh, Trust. Normativno-issledovatel'skaya stantsiya No.16.
(Zmiyev--Electric power plants)

MERZON, M.D., inzh.; KHARCHENKO, I.S., inzh.

Improving the design of the D-150A asphalt distributor. Stroi. i dor. mashinostr. 4 no.2:30-31 F '59. (MIRA 12:2)
(Asphalt) (Road machinery)

TIMCHENKO, A.D., kand. veter. nauk; KHARCHENKO, I.F., veterinarnyy vrach-epizootolog

Chemotherapy of pasteurellosis in cattle. Veterinariia 41 no.1: 34-35 Ja '64. (MIRA 17:3)

1. Khar'kovskiy zooveterinarnyy institut (for Timchenko). 2. Feodosiyskaya mezhrayonnaya veterinarnaya laboratoriya (for Kharchenko).

FOMICHEVA, A., chertezhnitsa (Tula); SERDYUK, tekhnolog; KHARCHENKO, K., slesar'-lekal'shchik; ZUBOVA, Ye., inzh. (G.Krasnyy Luch, Luganskoy oblasti); SHPAHER, B., inzh. (G. Krasnyy Luch, Luganskoy oblasti); GIDON, L., inzh. (Moskva) Avramova, L., apparatchitsa, (g. Lisichansk)

Our readers' comments on work nominated for Lenin Prizes. Sov. profsoiuzy 17 no.6:31-32 Mr '61. (MIRA 14:3)

1. Tul'skiy zavod "Shtamp" (for Serdyuk). 2. Kirovskiy zavod, Leningrad (for Kharchenko).

(Lenin Prizes)
(Russian literature)

KHARCHENKO, K., inzh.

Bruce-type antenna. Radio no.3:47-48 Mr '61. (MIRA 14:8)
(Antennas (Electronics))

KHARCHENKO, K., inzh.

Antenna for long-distance television reception. Radio no.4: 28-29 Ap '61. (MIRA 14:7)
(Television--Antennas)

KHARCHENKO, K.

Wave duct with six elements. Radio no.5:41-42 My '61.
(MIRA 14:7)

(Radio—Antennas)

KHARCHENKO, K., inzh.

Double Bruce-type antennas. Radio no.8:43-46 Ag '61. (MIRA 14:10)
(Radio--Antennas)

KHARCHENKO, K., inzh.

More about bruce-type antennas. Radio no.11:50-53 N '62.
(MIRA 15:12)

(Radio—Atennas)

KHARCHENKO, K., inzh.; ISUPOVA, S.

Partial zig-zag type antenna. Radio no.1:24-27 Ja '65. (MIRA 18:4)

KHARCHENKO, K., inzh.

An aid for the designers of ultrashort wave antennas. Radio no.2:19-20,23 F '65. (MIRA 18:4)

KHARCHENKO, K., inzh.

Antenna with high directivity. Radio no.4:26-27 Ap '65. (MIRA 18:5)

KHARCHENKO, K., inzh.; SHNITMAN, B.

Indoor television antenna. Radio no.7:25 Jl '65. (MIRA 18:9)

DUDIK, F.S. [Dudyk, F.S.]; KHARCHENKO, K.D.

Planting time of perennial flowers. Visnyk Bot.sada AN URSR no.1: 75-78 '59. (MIRA 13:8)

(Perennials)

KHARCHENKO, K.D.

Studying conditions of gladiolus growth as related to disease.
Trudy Bot.sada AN URSR 6:83-90 '59. (MIRA 13:5)
(Gladiolus--Diseases and pests)

KHARCHENKO, K.D.

Raising irises from seed. Visnyk Bot. sada AN URSR no. 2:40-42 '60.
(MIRA 14:4)

(Kiev—Iris)

KHARCHENKO, K.D.

Developing new perennial phlox varieties. Visnyk Bot. sada AN URSR no. 2:43-48 '60. (MIRA 14:4)
(Kiev--Phlox--Varieties)

KHARCHENKO, K.D.

Biological characteristics of cultivated forms of the panicled phlox. Trudy Bot. sada AN URSR 7:107-112 '60. (MIRA 14:4)
(Phlox)

KHARCHENKO, K.I.

KONSTANTINOV, A.R.; KHARCHENKO, K.I.

Determination of evaporativity in the Sal Steppe region. Trudy GGI no.57:73-85 '56. (MLRA 10:6)

(Sal Steppe--Evaporation)

KHARCHENKO, K.I.

USSR/Cultivated Plants - General Problems M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53514

Author : Kharchenko, K.I.

Inst : State Hydrological Institute

Title : The Results of Measurements of the Overall Evaporation and Transpiration of Various Agricultural Crops in the Region of Sal'sk Steppes

Orig Pub : Tr. Gos. Gidrolog. in-ta, 1956, vyp. 57 (III), 147-190

Abstract : The observations were conducted by the Dubov Scientific Research Laboratory of Hydrology (Rostovskaya Oblast') on bare fallow plots and in the fields with different agricultural crops on a specially constructed soil-evaporating platform adjoining the meteorological and water evaporating platform. With regard to the nature of the variation in overall evaporation in terms of time, the

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KHARCHENKO, K.I.

Agroclimatic conditions and evaporation from farm fields in steppes of the lower Don Valley. Trudy GGI no.71:36-86 '59. (MIRA 12:5)

(Don Valley--Crops and climate) (Evaporation)

KONSTANTINOV, A.R.; KHARCHENKO, K.I.; BARKHATOVA, M.R.; BUROV, V.S.

Investigation of evaporation from farm fields. Trudy GGI no.91:76-109 '61. (MIRA 14:8)
(Evaporation)
(Crops and climate)

KHARCHENKO, K.I.

Overall evaporation from various types of arable land in the case of optimum soil moisture. Trudy GGI no.82:102-114 '62. (MIRA 15:6)

(Evaporation)

KHARCHENKO, S.I.; KHARCHENKO, V.I.

Total evaporation from the soil under conditions of a zone of insufficient moisture and the methodology of calculating it. Trudy GGI no.125:34-57 '65.

(MIRA 18:12)

KHARCHENKO, K. S. and E. A. BELETSKII.

Sovremennye metody mekhanizatsii lekal'nogo proizvodstva. Moskva, Mashgiz, 1949. 166 p. illus.

Modern methods of mechanizing the pattern making industry.

DLC: TS240.B4

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

RODIN, Ivan Ivanovich; KHARCHENKO, K.S., red.

[New bench tools] Novyi slesarnyi instrument. Leningrad, 1964. 19 p. (MIRA 17:11)

KHARCHENKO, K.S., slesar'-lekal'shchik; ANDREYEV, V.M., prof., otv.red.; SUKHOV, I.V., red.; KLOPOVA, T.B., tekhn.red.

[Sine attachment for finishing gage boards designed by gager Konstantin Simonovich Kharchenko] Simusnoe prisposoblenie dlia dovodki shablonov konstruktsii slesaria-lekal'shchika Konstantin Simonovich Kharchenko. Leningrad, 1954. 4 p. (Listok novatora, no.1(240)). (MIRA 14:7)

1. Leningradskiy Dom nauchno-tekhnicheskoy propagandy. 2. Starshiy inzh. Otdela novov tekhnologii mashinostroyeniya Leningradskogo Doma nauchno-tekhnicheskoy propagandy (for Sukhov).
(Gages)

ZAGRETSKIY, Pavel Pavlovich; KHARCHENKO, Konstantin Simonovich; MITRO-FANOV, V.P., inzhener, retsenzent; VAKSER, D.B., dotsent, redaktor; NIKITIN, P.S., inzhener, redaktor; LEYKINA, T.L., redaktor; PETERSON, M.M., tekhnicheskiy redaktor.

[Fitter and tool maker] Slesar'-lekal'shchik. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1955. 319 p. (MLRA 8:10)
(Machine-shop practice)

ZAGRETSKIY, Pavel Pavlovich; KHARCHENKO, Konstantin Simonovich; KISELEV, B.M., retsenzent; KABANOV, N.N., red.; CHFAS, M.A., red. izd-va; BARDINA, A.A., tekhn. red.

[Technological processes of high-precision machining] Tekhnologiia slozhnykh lekal'nykh rabot. Moskva, Mashgiz, 1963. 166 p. (MIRA 16:5)
(Machine-shop practice)

SERGEYEV, Mikhail Afanas'yevich; GUSHCHIN, V.F., inzh., retsenzent; KHARCHENKO, K.S., red.; DENINA, I.A., red. izd-va; SHCHETININA, L.V., tekhn. red.

[Increasing labor productivity in fitting and assembling work] Povyshenie proizvoditel'nosti truda pri slesarnykh i sborochnykh rabotakh. Izd.2., perer. i dop. Moskva, Mashgiz, 1963. 294 p. (MIRA 16:7)
(Machine-shop practice--Production methods)

KHAYKIN, M.; KHARCHENKO, L., red.; STEBLYANKO, T., tekhn. red.

[Conversation on longevity]Razgovor o dolgoletii. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1962. 104 p. (MIRA 16:1)
(LONGEVITY)

MURAV'YEVA, M., kand. biolog. nauk; D'YAKOV, Yu., kand. biolog. nauk; KHARCHENKO, L.

Virus infection of potatoes. Zashch. rast. ot vred. i bol. 10 no.6:52-53 '65. (MIRA 18:7)

1. Dal'nevostochnaya stantsiya zashchity rasteniy, Ussuriysk (for Murav'yeva). 2. Nauchno-issledovatel'skiy institut kartofel'nogo khozyaystva (for D'yakov, Kharchenko).

SMIRNOV-KAMENSKIY, Yevgeniy Arsen'yevich; KHARCHENKO, L., red.

[Kislovodsk Health Resort] Kurort Kislovodsk. Stavropol' Knizhnoe izd-vo, 1965. 209 p. (MIRA 18:12)

SHINKARENKO, A.; VISHNEVSKIY, A.; KHARCHENKO, L., red.;
KOBYL'NICHENKO, A., tekhn. red.

[Mud therapy at Caucasian Mineral Waters] Griazelechenie na Kavkazskikh mineral'nykh vodakh. Stavropol', Knizhnoe izd-vo, 1963. 54 p. (MIRA 17:3)

BERNSHTEYN, Arnol'd Iosifovich; KHARCHENKO, L., red.

[The Pyatigorsk Health Resort] Kurort Piatigorsk. Stavropol', Knizhnoe izd-vo, 1963. 188 p. (MIRA 17:5)

PISLEGIN [illegible], prof.; KHARCHENKO, L., red.

[Effect of mineral waters on the human body] Vliianie mineral'nykh vod na organizm cheloveka. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1964. 63 p. (MIRA 18:5)

KHARCHENKO, L.A.

Diagnostic significance of the titration allergic test in brucel-losis. Mikrobiol. zhur. 27 no.1:59-65 '65. (MIRA 18:7)

1. Donetskiy meditsinskiy institut.

DVOYCHENKO, N.K.; KHARCHENKO, L.F.

Key cross section of Upper Silurian and Devonian sediments in the northern margin of the Dzungaria-Balkhash geosyncline. Mat.po geol.i pol.iskop.TSentr.Kazakh. no.2:11-20 '62. (MIRA 15:12)
(Karkaralinsk District--Paleontology,Stratigraphic)

KHARCHENKO, L.G.; DOKSHITSKAYA-ZATON, V.M.

Effectiveness of treating arteriosclerosis with an iodine tincture of sour milk or kefir in combination with ascorbic acid. Vrach. delo no.8:117-118 Ag '61. (MIRA 15:3)

1. Poliklinicheskoye otdeleniye Pervoy khar'kovskoy oblastnoy bol'nitsy.

(IODINE—THERAPEUTIC USE)
(ASCORBIC ACID—THERAPEUTIC USE)
(ASTERIOSCLEROSIS)

IZOTOVA-VINTER, Aleksandra L'vovna; KHARCHENKO, L.I., red.; CHARYKOVA, G.M., tekhn.red.

[Health resort of Teberda] Kurort Teberda. Stavropol, Stavropol'skoe knizhnoe izd-vo, 1959. 71 p. (MIRA 13:9)
(TEBERDA--HEALTH RESORTS, WATERING PLACES, ETC.)

KHARCHENKO, L. I.

STOYANOV, Filipp Dmitriyevich, vrach [deceased]; SHUKEVICH, Lidiya Ivanovna, vrach; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn.red.

[The Pyatigorsk health resort] Kurort Piatigorsk. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1959. 102 p. (MIRA 13:1)
(PYATIGORSK--HEALTH RESORTS, WATERING PLACES, ETC.)

SAVOSHCHENKO, Iosif Sergeyevich; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn.red.

[Yessentuki health resort] Kurort Essentuki. Izd.5. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1959. 167 p. (MIRA 13:5)
(YESSENTUKI--DESCRIPTION)

SMIRNOV-KAMENSKIY, Yevgeniy Arsen'yevich; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn.red.

[Two years in China; a Soviet physician's notes] Dva goda v Kitae; zapiski sovetskogo vracha. Stavropol', Knizhnoe izd-vo, 1959. 196 p. (MIRA 13:5)
(CHINA--SOCIAL CONDITIONS) (CHINA--MEDICINE)

TABOLOV, Viktor Stepanovich; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn. red.

[Corpulence and its treatment at health resorts of the Caucasus Mineral Waters region] Ozhirenie i ego lechenie na kurortakh Kavkazskikh Mineral'nykh Vod. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1960. 77 p. (MIRA 14:5)
(CORPULENCE) (CAUCASUS--HEALTH RESORTS, WATERING PLACES, ETC.)

MALAKHOV, N.I.; GNILOVSKIY, V.G., kand.geograf.nauk; VOLODKEVICH, I.I. starshiy nauchnyy sotrudnik [deceased]; SEREDIN, R.M., dotsent, kand.biolog.nauk; VISHNEVSKIY, A.S., doktor med.nauk; SKRIPCHINSKIY, V.V., dotsent; GALUSHKO, A.I.; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn.red.

[Caucasian Mineral Waters] Kavkazskie Mineral'nye Vody; putevoditel'. Izd.5., perer. i dop. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1960. 339 p. (MIRA 13:11)

1. Bal'neologicheskiy institut na Kavminvodakh (for Volodkevich). (CAUCASUS--MINERAL WATERS)

SHIRYAYEV, Sergey Dmitriyevich. Prinimal uchastiye MORGUNOV, B.P. NIKITIN, V.A., al'pinist, red.; SKLYARENKO, V.V., al'pinist, red.; CHILOVSKIY, V.G., red.; KHARCHENKO, L.I., red.; STEBLYANKO, T.V., tekhn.red.

[Across the Northern Caucasus] Po Severnomu Kavkazu. Stavropol', Stavropol'skoe knizhnoe izd-vo, 1960. 380 p.

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